Pedaling Lifecycle Funds:
Balancing the Uphill Climb to Riches with the Downhill Need to Keep Them

Several of you have called and e-mailed me over the past couple months, urging me to jump into the vacuum left by the lack of benchmarks for target date lifecycle funds. Thanks to your urging I'm in the game, and have teamed up with top professionals to form Target Date Analytics (TDA). Our mission is to develop standards for understanding and evaluating target date lifecycle funds. My partners in this endeavor are Dr. Craig Israelsen, a professor at Brigham Young University who has written extensively about his groundbreaking research on indexes and benchmarks, and Joe Nagengast, author of 2 comprehensive studies on target date funds called "Popping the Hood." Please visit us at www.TDBench.com.

Plan sponsors have a fiduciary duty to employ a prudent process in making investment decisions. The choice of target date fund providers should be conducted prudently and with well established criteria in support of the process. Until recently, there has been a lack of firm ground to stand on when choosing between competing target date providers. Target Date Analytics (TDA) provides much needed objective benchmarks to aid in the selection and monitoring process and to support the fiduciary duty to employ a rational process. TDA believes that target date funds should have the following 2 objectives in this order: (1) protect these savings against loss and (2) grow these assets as much as possible without jeopardizing the 1st objective. Accordingly, we have developed standards for achieving these objectives that will be used to evaluate all target date funds. We'll also evaluate the target date industry as a whole by using aggregates of industry practices.

Here's a quick overview of what we're developing. I'd appreciate your thoughts and feedback. Target date funds are difficult to evaluate because each provider has a different view of how to make risk-reward trade-offs for the "average" participant. Consequently each fund is more or less aggressive than the others, with varying types of risky assets and allocations. For the most part the only thing target date funds have in common is the target date, which is designed to be the date that the investor expects to retire. All agree that the investor should become more protective of his accumulated savings as the target date draws near, but the paths from here to there vary widely across products, as does the level of protection.

TDA will soon be launching standards that incorporate sensible glide paths and best practice asset classes, at least in our opinion. We base our standards on accepted principles of Modern Portfolio Theory (MPT), Liability-Driven Investing (LDI) and actuarial science. We look to

MPT for guidance during the accumulation phase, when we want the most return for the least risk. Then as retirement draws near we owe ourselves sufficient savings to live in dignity, so we look to LDI and actuarial science to guide us toward meeting this liability and protecting our hard earned savings for a lifetime.

The Capital Asset Pricing Model (CAPM) is a central principle of Modern Portfolio Theory. Nobel laureate Dr. William F. Sharpe demonstrated that a portfolio that mixes risky assets with riskless assets dominates the efficient frontier. The famous picture that describes this important insight is shown below. The red curve is the efficient frontier and the green line is what Dr. Sharpe calls "the capital market line", CML. This line is drawn from the riskless asset on the far left to the point of tangency on the efficient frontier. Note that for risk levels that are less than the point of tangency the CML provides greater returns for less risk than the frontier – the CML dominates. CAPM has fallen into disrepute because a misapplication of the theory has led to the proclamation that beta is dead. Beta is dead because style effects disprove the theory, but most importantly it's dead because the theory has been misused. The point of tangency on the efficient frontier is supposed to be the "market portfolio." Dr. Sharpe's intention is that this market portfolio should be all risky assets in the world. Instead it has been misunderstood and misapplied to be a basket of just U.S. stocks, most often proxied by the S&P500. This is wrong.

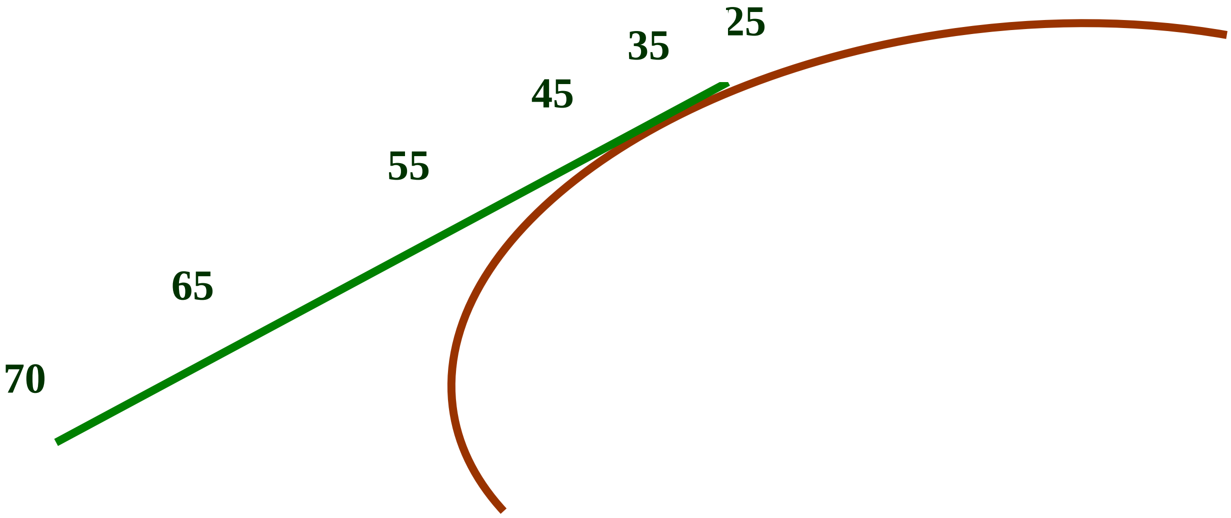
The proper view of CAPM is that the CML combines the world basket of risky assets with the riskless asset. We at TDA think this is what target date funds should do on behalf of investors because it provides the most return for the least risk. Furthermore we believe that thoughtful transition from right to left down the CML is imperative. Investments ought to become more protective as retirement approaches. We use Liability-Driven Investing (LDI) and actuarial science to guide this path. So our standards have the following characteristics:

- There are just 2 assets in our standard, a risky asset and a riskless asset. The risky asset is constructed on the foundation of MPT, and the riskless asset is based on the principles of LDI.
- The risky asset is the most broadly diversified basket of global stocks, bonds, real estate, etc. that we can invest in. We mean this – we plan to actually buy this basket, as well as the riskless asset.
- The riskless asset is designed to not only be safe but importantly to maintain purchasing power, i.e. to protect against inflation. We frequently refer to this as the "reserve" asset, using the parlance of liability driven investing.
- The "glide path", or changes in allocation, progresses in an orderly fashion from all risky assets to all riskless assets. We think this path should be geometrically smoothed so allocations toward the riskless asset proceed slowly at first and then accelerate as retirement draws near. We want sufficient opportunity to build wealth, and then we want to protect this accumulation very quickly, so it can last a lifetime.

The following graph summarizes our view of best target date practices. The numbers shown in the graph are participant ages in the standards we're developing. We call our standards the "Pure Target Date Series**".** Exponential smoothing along the "glide path" moves investors gradually down the capital market line, so the protection of the "reserve asset", namely cash plus other inflation-protected investments, begins to become meaningful as the investor approaches his or her 50s. In other words, the accrued benefits of higher returns with less risk are preserved at the most critical times. These later years are most important for several reasons:

1. Account balances should be largest as returns and contributions accumulate and compound
2. New contributions should be increasing since salaries will likely increase
3. The ability to extend employment diminishes.

Modern Portfolio Theory and Liability Driven Investing Guide the "Pure Target Date Series"



Stay tuned for TDA performance evaluation tools that use the Pure Target Date Series as benchmarks. We'll also compare and contrast each fund and fund family to all of their competitors. In other words, our evaluations will focus on both common practices and best practices, so you'll have a rich resource for making this important life decision.